

ABSTRACT

A capacitance fingerprint imaging apparatus including an insulator layer and a pixel array coupled to a bottom surface of the insulator layer. Each pixel of the array has a storage capacitor and an electrode coupled to the bottom surface of the insulating layer. A charge may be driven from a finger into the storage capacitor through an electrode. A conductive structure may be adjacent the active area of the imager through which a small pulse is applied to the finger. The pulse may allow an increase in the charge difference between the pixels that have contact with the finger and the pixels that do not contact the finger. A pulse may also be applied to the other storage capacitor contact so that at every frame a combination of the charge from the storage capacitor driven by the finger and a constant charge due to the pulse will exit the capacitor.